

What is claimed is:

1. A system for accessing a node of a private network,
comprising:

an assigning portion for assigning external port values to respective
network nodes based on information collected from the network nodes of the
5 private network, and storing the assigned external port values;

an exchanging portion for exchanging the external port values of the
respective network nodes of private networks; and

an address converting portion for converting the external port values
into corresponding private IP addresses and internal port values when a
10 network node of one private network accesses another network node of
another private network by using the external port values of another network
node of another private network.

2. The system as claimed in claim 1, wherein each of the network
nodes is assigned at least one external port value.

3. The system as claimed in claim 2, wherein the external port
value has an http communication protocol.

4. The system as claimed in claim 2, wherein the external port
value has an FTP communication protocol.

5. The system as claimed in claim 2, wherein the external port value has a TELNET communication protocol.

6. A method for accessing a node of a private network, comprising the steps of:

a) assigning separate external port values to a plurality of network nodes of private networks based on information collected from the network nodes, and storing the assigned external port values;

b) exchanging the assigned external port value of a certain network node of a certain private network with the assigned external port value of another network node of another private network, and storing the exchanged external port value; and

c) converting the exchanged external port value into a corresponding private IP address and internal port value, enabling the certain network node of the certain private network to access another network node of another private network by using the external port value of another network node of another private network.

7. The method as claimed in claim 6, wherein the step c) converts the private IP address and internal port value into a corresponding external port value for forwarding a packet from a certain private network to another external private network, while converting the external port value of another external private network into corresponding private IP address and internal

port value for forwarding a packet from another external private network to the certain private network.

8. The method as claimed in claim 6, wherein each of the network nodes is assigned at least one external port value.

9. The method as claimed in claim 8, wherein the external port value has an http communication protocol.

10. The method as claimed in claim 8, wherein the external port value has an FTP communication protocol.

11. The method as claimed in claim 8, wherein the external port value has a TELNET communication protocol.

12. A method for accessing a node of a private network, comprising the steps of:

- i) assigning external port values to network nodes based on an information collected from the network nodes and storing the information in a mapping table;
- ii) generating a web page displaying node information of a private network, and linking the web page to a global IP address;
- iii) accessing the web page and the node information of the private network; and

10 iv) accessing one of the network nodes of the private network based on the node information obtained in step iii).

13. The method as claimed in claim 12, wherein the node information of step iii) comprises an external port value.

14. The method as claimed in claim 12, wherein the web page of step ii) displays a screen containing icons for respective nodes of the private network.

15. The method as claimed in claim 14, wherein each node is accessed by selecting and clicking the icon representing the node.

16. The method as claimed in claim 12, wherein a private network provided with at least one global IP address performs step i).

17. The method as claimed in claim 12, wherein a certain network node of a certain external private network performs step iii).

18. The method as claimed in claim 17, wherein the certain network node of the certain external private network performs step iv).

19. A system for accessing a node of a private network, having a first network and a second network connected on the Internet, wherein the first network comprises:

a first external port value assigning portion for assigning external port
5 values to network nodes based on information collected from the network
nodes;

a first exchanging portion for exchanging an external port value of a
certain node of the first network with an external port value of one of the
nodes of the second network, and storing the exchanged external port value;
10 and

a first address converting portion for converting the external port value
of the certain node of the first network into a corresponding external port
value, enabling the certain node of the first network to access the one of the
network nodes of the second network, and

15 the second network comprises:

a second external port value assigning portion for assigning external
port values to network nodes based on information collected from the network
nodes;

a second exchanging portion for exchanging an external port value of a
20 certain node of the second network with an external port value of one of the
nodes of the first network, and storing the exchanged external port value; and

a second address converting portion for converting the external port of
the certain node of the second network into a corresponding private IP
address, enabling the one of the nodes of the first network to access the certain
25 node of the second network by using the external port value of the one of the
nodes of the second network.